

Knowledge and Perceptions of Reproductive Health  
and Family Planning Among Women in Tena, Ecuador

**An Honors Thesis (HONR 499)**

**by**

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A handwritten signature in black ink, reading "Jagdish Khubchandani", is written over a horizontal line.

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## ABSTRACT

RESEARCH PAPER: Knowledge and Perceptions of Reproductive Health and Family Planning Among Women in Tena, Ecuador

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The focus of this study was to assess the knowledge and perceptions regarding reproductive health and family planning among women in Tena, Ecuador. This study was conducted during a medical brigade in collaboration with the Ball State University Timmy Global Health chapter, a branch of a non-profit organization based out of Indianapolis, Indiana. Thirty-nine women were interviewed in Tena regarding their knowledge and practices as they related to their reproductive health and family planning techniques. Results from this case study indicated that there is an impending need to develop and implement a women's health program in Tena, Ecuador. The majority of participants possessed minimal knowledge about reproductive health and family planning methods. Furthermore, nearly all subjects indicated that they would participate in a women's health program should it be implemented in their community.

# Acknowledgements

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*Knowledge and Perceptions of Reproductive  
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Senior Thesis

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Ball State University  
Muncie, Indiana  
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# Table of Contents

Section	Page
<b>I. THE ISSUE</b>	
Introduction .....	1
Statement of the Issue .....	1
Purpose of the Study .....	2
Questions to be Answered .....	2
Inclusion and Exclusion Criteria of the Study .....	3
Assumptions of the Study .....	3
Significance of the Study .....	3
<b>II. METHODOLOGY</b>	
Introduction .....	5
Study Design .....	5
Arrangements for Conducting the Study .....	6
Procedures for Conducting the Study .....	6
<b>III. LITERATURE REVIEW</b>	
Introduction .....	9
Reproductive Health .....	9
Maternal Mortality .....	11
Family Planning .....	12
Summary .....	13
<b>IV. RESULTS, DISCUSSION, CONCLUSION, RECOMMENDATIONS</b>	
Results .....	14
Discussion .....	21
Conclusion .....	27
Recommendations for Implementation for Health Promotion Programs.....	28
Recommendations for Further Research .....	30
Study Limitations .....	30
References .....	31
Appendix .....	33

# SECTION I

## THE ISSUE

### Introduction

With an ever-growing population on the planet (7 Billion in 2013), reproductive health and family planning are two urgent priorities. Never before has our society placed such profound emphasis on reproductive health knowledge and family planning services. With an ever-increasing advancement in technology, many individuals and organizations around the world are working together to ensure that each and every individual receives adequate reproductive health education, as well as access to family planning services. Unfortunately, there are many underserved populations throughout the world that still have unmet needs. Women's health has long been a concern for the World Health Organization (WHO), but recently there has been renewed emphasis and a sense of urgency.

This study addresses a deeper understanding of the biological, social, cultural, and environmental determinants of women's health, drawing particular attention towards gender inequality and limited access to health care services and information..

### Statement of the Issue

Advancements in women's health around the globe are resulting in modest improvements. However, women's health is still neglected, resulting in adverse social, cultural, and biological disparities. In particular, women in underserved populations around the world

suffer a lot of disparity in reproductive and child health. Little research has been conducted amongst these populations and virtually no research on maternal and child health and reproductive health has been conducted in Tena, Ecuador. In order to better understand the indigenous populations in the Amazon Basin, the researcher and her team worked to shed light on these pressing issues.

### Purpose of the Study

The purpose of this study was to evaluate the knowledge and perceptions of reproductive health and family planning among women in Tena, Ecuador via a needs assessment. Furthermore, the larger goal was to later develop a program to address the community's health needs. Very little research has been conducted on reproductive health and family planning of Ecuadorian women as a whole and virtually no research of this kind has ever been conducted in Tena, Ecuador. This research study is the first of its kind and it will help provide valuable recommendations for future health programming in poor, rural Latin American communities. Upon graduation in May 2013, the researcher plans to move to Tena, Ecuador to develop and implement a health program based off of this needs assessment to address the community's needs.

### Questions to be Answered

1. What proportions of women in Tena, Ecuador have access to healthcare services and resources?
2. What reproductive health and family planning interventions are needed in Tena, Ecuador?
3. What are the identifiable risk and protective factors associated with reproductive health and family planning among women in Tena, Ecuador?

## Inclusion and Exclusion Criteria of the Study

Inclusion: Research subjects were females of reproductive age living in and around the satellite communities of Tena, Ecuador.

Exclusion: Pre-pubescent females and post-menopausal women were excluded from the study. Furthermore, all men were also excluded from this study.

## Assumptions of the Study

The basic assumptions of this study included:

1. The study participants provided honest and accurate responses.
2. The translators accurately conveyed and translated survey questions and responses.
3. No bias or influence was predisposed on study participants.
4. Females were not coerced or bribed to participate in the study.
5. Women were surveyed in a safe and comfortable environment.

## Significance of the Study

Very little research has been conducted in Ecuador regarding women and reproductive health and family planning. According to the Pan American Health Organization (PAHO), a regional office of the World Health Organization (WHO), in 2004, the majority (eight out of ten) of people living in rural Ecuador are poor, suggesting that there is a major lack of resources and access to health services for our target population (PAHO, 2004). In addition, according to the U.S. Centers for Disease Control and Prevention (CDC) Reproductive Health Survey (Ecuador), only 67.6% of rural Ecuadorian females between the ages of 15-24 received reproductive health education (CDC, 2005). Similarly, 56.7% of the females who did not receive reproductive health

education have engaged in premarital sex. Furthermore, 44% of females living in rural areas between the ages of 15-24 years report that they are sexually active and few (13.5%) report using some form of contraception (CDC, 2005). In general, a little less than 1 in 5 (18.1%) of indigenous women were able to identify two or more forms of contraception. In addition, nearly 39% of adolescents and young females in Ecuador reported being pregnant at least once, with the largest risk factor being a lack of formal reproductive health education (CDC, 2005). These dated statistics not only support the need to assess the population to determine current trends, but they also support the need to develop educational programs.



# SECTION II

## METHODOLOGY

### Introduction

The purpose of this research project was to conduct a needs assessment to evaluate the knowledge and perceptions of reproductive health and family planning among women in Tena, Ecuador with the intention of later developing a program plan to address the community's health needs. This research study involved a cross sectional survey research study in its first phase. The study design, details, content, and the protocol were sent to the Ball State University Institutional Review Board (IRB) and clearances were obtained for the entire project; please refer to the Appendices for a full record of IRB documents. This section highlights the methods used to investigate the problem and includes the following subdivisions: 1) study design, 2) arrangements for conducting the study, 3) procedures for conducting the study, and 4) data analysis.

### Study Design

This study was conducted in conjunction with a medical brigade in Tena, Ecuador through Timmy Global Health, a non-profit organization based out of Indianapolis, Indiana. Information was gathered from two types of sources, including: 1) in-person surveys, and 2) peer-reviewed journal articles. The survey instrument was a 65-item, two page, printed questionnaire that addressed the following areas: 1) demographic and background characteristics,

2) sexual education curriculum, 3) contraception use, 4) reproductive health treatment and examination, 5) infant and child mortality rates, 6) women's knowledge and perceptions, 7) social opinion and influence, and 8) access to health care.

### Arrangements for Conducting the Study

To conduct this study, the researcher collaborated with both her advisor Dr. Khubchandani and the Timmy Global Health medical brigade coordinator in Tena, Ecuador, August Longino. It was decided that a two-page valid and reliable survey would be created in order to assess the knowledge and perceptions of reproductive health and family planning among women in Tena, Ecuador. The study has been broken down into four sections: 1) introduction, 2) methodology, 3) literature review, and 4) results, discussion, conclusion, and recommendations.

### Procedures for Conducting the Study

Female subjects were recruited at four separate communities (Jatun Urku, Tamiaurku, El Calvario, and San Pedro de Sumino) via medical brigades through a non-profit organization, Timmy Global Health. During the scheduled medical brigade, a female translator approached each woman of reproductive age to initially gain verbal consent for participation. Women had the option to refuse participating in the study, but it was believed that the environment within the medical brigade would help elicit a high participation rate. Nevertheless, if a woman declined participation, she was not penalized in any form. Due to literary constraints, the survey was administered orally during the scheduled medical brigades in Tena, Ecuador. A team of students from the Ball State University Timmy Global Health chapter assisted in collecting survey responses, along with a trained female translator who spoke directly with the study participants. The Ball State University Timmy Global Health students only assisted in administering the

survey; they did not recruit study participants, nor did they explain or answer questions related to the study. These responsibilities were delegated to the primary investigator. All thirty-nine consenting women of reproductive age were surveyed during the regular medical brigade and the surveyor recorded their responses on the provided questionnaire to help chronicle participant responses. Data was collected anonymously to ensure confidentiality. No personally identifying information was collected, in order to ensure that the research team would have no way of identifying the women by their responses. The data was stored in a locked box to ensure that the participant responses remained secure and confidential. In regards to potential risks and discomforts related to the study, some questions on the survey asked respondents about their experiences regarding their sexual relationships, reproductive health, and family planning methods. There was a possibility that such questions may lead to discomfort for the participant. In order to minimize risks or stress for subjects, females were interviewed in a private location at the medical brigade. Furthermore, medical professionals were already on hand during the Timmy Global Health medical brigade and were available to help consult any females that became uncomfortable.

Incentives were not offered to study participants. Because the women were already participating in services through the Timmy Global Health medical brigade, further inducements were not needed. Furthermore, there was no financial expense to the subjects related to this survey. Although there were no research-related injuries, all females had access to a medical professional provided through the Timmy Global Health medical brigade. The surveyor made sure to ask each participant if she was willing to participate in the study. Please refer to the Appendices for complete copies of the study consent forms. All participants had the option to verbally deny study participation altogether, as well as to discontinue taking the survey at any

point in time. Once research materials were returned to the United States, the researcher compiled all thirty-nine survey responses in SPSS version 21.0. Descriptive and inferential statistics were computed to describe the respondents and their responses to the questionnaire.

# SECTION III

## LITERATURE REVIEW

### Introduction

This section presents literature related to the research project and includes the following sections: 1) reproductive health demographics in Ecuador and related Central and South American countries, 2) family planning methods in Ecuador and related Central and South American countries, and 3) a summary of the literature review.

### Reproductive Health

For many women, their years of sexual maturity offer multiple opportunities for personal fulfillment and growth. However, for many women around the world, their health between puberty and menopause may result in a significant burden of mortality, disease, and disability.

Among health advocates is the idea that every individual has the distinctive right to affordable resources, services, and information related to reproductive health and family planning. According to the World Health Organization (WHO), reproductive health “implies that people are able to have a responsible, satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so” (WHO, 2013a). Women’s health during their fertile years (typically between the ages of 15 and 49 years) is pertinent not only to the women themselves, but also has an impact on the health and development of their own children. This notion highlights an important point that by addressing



the health of girls and women today, we are making an investment for our future. According to the United Nations Population Division, there are some 600 million female adolescents living in developing nations (UNPD, 2008). With over half a billion female adolescents living in developing countries, it has become all the more crucial to address these adverse health issues. The majority of females in developing nations are not given adequate support and/or resources to address their health needs, particularly those related to their reproductive health. When these conditions are neglected, women face severe and adverse side effects.

A combination of unsafe sex and a lack on contraception results in unwanted pregnancies, unsafe abortions, complications of pregnancy and childbirth, and sexually transmitted infections including HIV, which is one of the leading causes of death globally among women of reproductive age (WHO, 2009). According to Weinstock, Berman, and Cates (2004), women in Latin American and sub-Saharan Africa are most at risk for sexually transmitted infections, with nearly one in four women having one of the four treatable infections – including syphilis, gonorrhoea, chlamydia, and trichomoniasis – at any point in time (Weinstock, Berman, Cates, 2004; WHO 2011; WHO 2009). Unfortunately, women generally experience less evident symptoms related to sexually transmitted infections, which results in delayed diagnosis, postponed treatment, and in worst cases, death (WHO, 2009). According to Glasier et al. (2006), long-term health implications related to sexually transmitted infections include: infertility, ectopic pregnancy, cancer, increased vulnerability to HIV infection, stillbirths, low-birth-weight infants, neonatal deaths, congenital syphilis, as well as negative social and cultural stigmas (Glasier et al., 2006; WHO, 2009). The adverse implications related to women's reproductive health is still a leading issue in today's world.

## Maternal Mortality

Maternal mortality (i.e. the death of a woman during pregnancy, delivery, or the postpartum period) is a key indicator of women's health and status. Complications of pregnancy and childbirth are another leading cause of death in young women between the ages of 15 and 19 years old in developing countries (WHO, 2009). Currently, over half a million women die each year due to maternal complications, with 99% of these cases occurring in developing countries alone (WHO, 2009). More specifically, according to the WHO maternal mortality country profile, women in Ecuador have a 1 in 350 lifetime risk of maternal death, as opposed to 9 maternal deaths per 100,000 live births in industrialized countries (WHO, 2007; WHO, 2009; WHO 2010). It is evident that Ecuadorian women are severely lacking in maternal health standards.

A majority of maternal deaths are preventable if a medical professional accompanied women during the time of their pregnancy and childbirth. Unfortunately, the use of midwives during childbirth is lacking in developing countries. The low abundance of said professionals along with the absence of the necessary skills, resources, equipment, and medicines to address such complications contributes to the high rates of maternal mortality in Ecuador, as well as other developing nations. Although the number of trained midwives is increasing around the world, women still face many other barriers regarding access to delivery services, including: physical inaccessibility, prohibitive costs, and inappropriate sociocultural practices (WHO, 2009). It is important to note that merely offering these services may not be enough to curb this issue. These services must also be of high quality and should adhere to cultural and social standards in order to accurately and effectively reduce maternal mortality rates around the globe.

## Family Planning

Family planning is an important component of women's health, particularly for women living in poor, developing nations. The number of children a woman has and the spacing of such children are directly linked to maternal health because it can help save the lives of millions of mothers and children, as well as improve the well-being of families and communities.

Unfortunately, the use of family planning methods has not been consistent across countries and communities. According to the United States Agency for International Development (USAID), in developing nations, approximately 222 million women would like to space or postpone their pregnancies, but they are not using a contraceptive method in order to do so (USAID, 2012). As mentioned earlier, women in developing countries have limited access to health care professionals, services, and resources, which makes it difficult for women to accurately and effectively plan the size and spacing of their family.

There are numerous benefits to family planning across all demographics. According to WHO and USAID, family planning helps save the lives of women, newborns, children, and teenage girls; helps lower the number of unplanned pregnancies and abortions; reduces infant mortality rates; helps prevent the spread of HIV/AIDS; benefits families and communities; empowers people and enhances education; and helps reduce the burden on natural resources and the environment due to a slowing population growth (USAID, 2012; WHO, 2012).

Unfortunately, these benefits are not exercised to their full potential due to the numerous barriers that women face when dealing with family planning, including: limited access to services; adverse side effects; infrequent sex; fear of their partner's disapproval; and religious beliefs that do not support family planning (USAID, 2012). By increasing the use of family planning

methods among families, this in turn will spur a positive feedback loop wherein communities and nations will reap the benefits from stronger, healthier, and more productive families.

The primary family planning techniques involve both modern and traditional methods of contraception; such methods include: oral contraceptives, implants, intrauterine device (IUD), male and female condoms, male and female sterilization, emergency contraceptive pill, withdrawal, calendars, and periodic abstinence. The use of aforementioned methods depends heavily on a woman's access to such resources, her knowledge and perceptions of these methods, as well as social and cultural influence on her decision-making processes. A new emphasis in family planning plays a critical role in determining the health of women and their families around the world, while empowering communities and nations to improve the overall health status of their citizens.

### Summary

This section presented a review of the literature regarding reproductive health demographics, maternal mortality rates, and family planning methods in Ecuador and similar developing countries. The literature indicated that there is much work to be done in the field of reproductive health and family planning for women around the globe. Particular emphasis must be placed on women in poor, rural communities of developing nations because they are most prone to suffering the adverse health effects related to such issues of reproductive health and family planning.



## SECTION IV

### RESULTS, DISCUSSION, CONCLUSIONS, RECOMMENDATIONS

#### Results

The purpose of this research project was to conduct a needs assessment to evaluate the knowledge and perceptions of reproductive health and family planning among women in Tena, Ecuador with the intention of later developing a program plan to address the community's health needs. This particular case study of thirty-nine women allowed the researchers to gain valuable insight regarding the population of interest. Such results will play a vital role in the development of a community health program geared towards developing educational programs to enhance the knowledge and perceptions of reproductive health needs of the communities in Tena, Ecuador.

**TABLE 1: Demographic and Background Characteristics**

Variable	Category	N	(%)
Sex	Female	39	100
Age	< 20	5	12.8
	20-29	10	25.7
	30-39	11	28.2
	≥ 40	13	33.3
Highest Level of Education	Educación Básica (grades 1-7)	21	77.8
	Colegio (grades 8-12)	4	14.8
	Bachiller (high school graduate)	2	7.4
Employment Status	Yes	7	20.6
	No	27	79.4



TABLE 1: Demographic and Background Characteristics, continued			
Variable	Category	N	(%)
Number of Children	0	3	7.7
	1-2	9	23.1
	3-5	13	33.3
	6-8	8	20.5
	9-12	6	15.4
Relationship Status	Married	33	84.6
	Single / Widowed	6	15.4
Pregnant	Yes	1	2.6
	No	38	97.4
Age of first menstruation	≤ 13	24	64.9
	≥ 14	13	35.1
Age of first marriage	< 18	18	54.5
	≥ 18	15	45.5
Age of first sexual intercourse	< 18	20	55.6
	≥ 18	16	44.4
Age of first childbirth	< 18	11	32.4
	≥ 18	23	67.6
Smoker or Drinker?	Yes	19	57.6
	No	14	42.4

**Table 1: Demographic and Background Characteristics**

Table 1 highlights the demographic information of all thirty-nine women. The majority (66.7%) of women interviewed were below the age of 40, with 12.8% of the total women under the age of 20 years old. An overwhelming number of women (77.8%) had only completed the most basic level of education (Educación Básica). Employment status was another area of interest, with the majority (79.4%) of women reporting unemployment. As expected, the women in this study also exhibited large family sizes, with the majority (69.2%) of women having between 3-12 children. Furthermore, the majority (84.6%) of the women in this study were married, some even as young as thirteen years old. Furthermore, several women indicated that their marriage was a “unión libre,” a common law indicating that the couple was not married in the church, but have obtained marriage status because they live together and/or they have

children together. A few women also stated that their marriage was arranged, but no additional information was gathered relating to their arranged marriage. Only one of the women in the study was currently pregnant, comparisons therefore, could not be made.

The majority (64.9%) of women experienced their first menstruation at 13 years of age or younger. Similarly, 54.5% of the surveyed women were married before 18 years of age, which also contributed to the majority (55.6%) of women engaging in sexual intercourse before 18 years of age. Although the majority of women reported early menarche and early marriages, the majority (67.6%) of women did not have their first child until 18 years of age, thus decreasing their risk of pregnancy complications.

Last, the majority (57.6%) of women were current substance users (i.e. tobacco or alcohol). Alcohol consumption appeared to be more prevalent among the women rather than smoking, and some women indicated that they drink “chicha,” a fermented, alcoholic beverage made from yucca. Substance use during pregnancy is mentioned later in this section.

**TABLE 2: Sex Education Curriculum**

Variable	Category	N	(%)
Sex education in school?	Yes	11	34.4
	No	21	65.6
Sex education topics covered in schools	The development of the body at puberty	8	20.5
	The female reproductive system	8	20.5
	The male reproductive system	8	20.5
	Menstruation	8	20.5
	Sexual relations	10	25.6
	Pregnancy and childbirth	6	15.4
	Birth control	9	23.1
	Sexually transmitted diseases	7	17.9
	Other topics	6	15.4
Source of information regarding reproductive health and family planning.	Mother	21	58.3
	Other (friends, siblings, relatives, doctors, school, no one)	15	41.7

**Table 2: Sex Education Curriculum**

Table 2 identifies the level of sex education received by individuals in the surveyed communities. As exhibited in Tena, the majority (65.6%) of women did not receive formal sexual education in their school curriculum. The small percentage of the women who did receive sex education reported learning about the following topics: the development of the body at puberty (20.5%), the female reproductive system (20.5%), the male reproductive system (20.5%), menstruation (20.5%), sexual relations (25.6%); pregnancy and childbirth (15.4%); birth control (23.1%); and sexually transmitted diseases (17.9%). When women were asked whether or not a mother can get pregnant while breastfeeding, only eight women correctly answered yes to this question. This is a prime example of the knowledge gap that needs to be addressed in these communities. Last, the majority (58.3%) of women indicated that their mother is their main source of information regarding reproductive health and family planning.

<b>TABLE 3: Contraception Use</b>			
<b>Variable</b>	<b>Category</b>	<b>N</b>	<b>(%)</b>
Does the female use birth control?	Yes	19	48.7
	No	29	51.3
Primary method of birth control	IUD or Copper T spiral	1	4.8
	Contraceptive injection/shot	3	14.3
	Implant	6	28.6
	Contraceptive pill	0	0
	Condom	2	9.5
	Withdrawal	2	9.5
	Abstinence	2	23.8
	Other (tubal ligation, calendar, menopause)	5	12.8
Primary reason for birth control	Does not want anymore children	14	50
	To space or postpone pregnancy	7	25
	Other health and economic reasons	7	25
Desire to change current birth control method	Keep it the same	14	73.7
	Different	2	10.5
	Does not know	3	15.8
Plans to use birth control in the future?	Yes	19	55.9
	No	15	44.1



### Table 3: Contraception Use

Table 3 highlights the variety of contraception usage among the thirty-nine women surveyed. A slight majority (51.3%) of women indicated that they are not currently using any form of birth control. However, the contraceptive implant was the highest reported method (28.6%) of birth control. Many women indicated that they preferred the implant because it did not require any additional work for the woman or her partner. Out of the women who responded, zero females indicated that they were taking an oral contraceptive.

Half of the women indicated that their primary reason for birth control was to due to a lack of interest to have any more children. In a few instances, the woman would indicate that she did not want any more children, while her husband would state the opposite. Only one in four women indicated that their primary reason to use birth control is to space or postpone pregnancy.

The majority (73.7%) of women stated that they were content with their current birth control method, which is a good indication that women are pleased with their contraceptive use. Furthermore, the majority (55.9%) of women who were not currently taking birth control had intentions to use a birth control method in the future; another good sign that women in the communities are open to family planning methods.

TABLE 4: Treatment and Examination			
Variable	Category	N	(%)
Was the female treated for a reproductive health issue?	Yes	13	50
	No	13	50
Has the female received a pap smear in her lifetime?	Yes	15	45.5
	No	18	54.5
Does the female have a STD?	Yes	2	6.5
	No	24	77.4
	Not sure	5	16.1

#### Table 4: Treatment and Examination

Table 4 identifies the number of women who have been treated or examined for a reproductive health issue. These results highlighted that there was a 50/50 split between women who had been treated for a reproductive health issue and those who have yet to receive this service. Similarly, the majority (54.5%) of females have not received a formal vaginal examination (pap smear) during her lifetime. Additionally, nearly one fourth (22.6%) of females either currently have a sexually transmitted infection or they are unsure of their diagnosis. Furthermore, when women were asked whether a person can be infected with a sexually transmitted infection and present no symptoms, only 11.1% of the women correctly answered yes to this question.

TABLE 5: Mortality Rates			
Variable	Category	N	(%)
Number of women with an infant that has died under the age of 1	0	31	93.8
	1	2	6.1
Number of women with children who died under the age of 5	0	30	90.9
	1	3	9.1
Number of miscarriages	0	0	87.5
	≥1	4	12.5
Number of unplanned pregnancies	0	3	33.3
	1-4	3	33.3
	5+	3	33.3
Pregnancy complications	Yes	13	41.9
	No	18	58.1
Alcohol or Tobacco use during pregnancy	Yes	3	12.5
	No	21	87.5

#### Table 5: Mortality Rates

Table 5 highlights the infant and child mortality rates of the surveyed women, as well as lists other complications related to pregnancy. Only five women indicated that they had either lost their infant or child under the age of 5 years old; however, the research team recognizes that



these rates are likely to be higher in regions of Tena when compared to Quito, the capital city of Ecuador. Additionally, four women indicated having at least one miscarriage, with one particular woman who had a miscarriage of twins. Interestingly, the majority (66.6%) of women indicated that they had at least one unplanned pregnancy. Last, 12.5% of women indicated that they either smoke or drank during pregnancy, which may have resulted in one of the reported miscarriages. In order to continue improving the lives of mothers, infants, and children, women need to be encouraged to not smoke or drink during pregnancy in order to prevent birth complications and defects.

TABLE 6: Opinion and Influence			
Variable	Category	N	(%)
At what age does the female believe it is appropriate to begin sexual relations?	< 15	2	8.7
	15-18	13	56.5
	18+	8	34.8
Does the female’s husband/boyfriend agree with using contraception (whether personally or for the female)?	Yes	11	37.9
	No	18	62.1
Does the female’s husband/boyfriend respect her opinion?	Yes	21	70
	No	9	30

**Table 6: Opinion and Influence**

Table 6 illustrates the opinions and level of influence for the surveyed women regarding their reproductive health and family planning methods. The majority (65.2%) of women surveyed believed that it was appropriate for a female to begin sexual relations below 18 years of age. Women were also asked about the level of respect they receive from their husband or boyfriend. The majority (62.1%) of women expressed that their husband does not agree with using contraception, whether for him personally or for the female. Furthermore, nearly one in three women (30%) indicated that their husband or boyfriend does not respect her opinion.

TABLE 7: Health Care Services			
Variable	Category	N	(%)
Has the female ever received prenatal care?	Yes	30	85.7
	No	5	14.3
Does the female have regular health care access?	Yes	31	91.2
	No	3	8.8
Would the female attend a free sex education class?	Yes	33	86.8
	No	5	13.1
Would the female attend a free family planning class?	Yes	32	88.9
	No	4	11.1
Where does the female obtain her health needs? (medicine, contraception, examinations, etc.)	Subcentro de Salud (local health clinic)	31	70.5
	Local Hospital	6	13.6
	Other (Quito, pharmacy, family, community members)	7	15.9

**Table 7: Health Care Services**

Table 7 identifies the females' level of access to health care services in their communities. An overwhelming majority (91.2%) of women indicated that they have regular access to health care. Similarly, a large majority (85.7%) of women received prenatal care during their pregnancy, which mostly included prenatal vitamins and iron supplements. Last, the majority of women (86.8% - 88.9%) indicated that they would attend a free sex education and family planning class should it be offered in their community.

## Discussion

The following section takes a closer look at the reported results and identifies areas of particular interest as they relate to this study. Health education is an area of great concern for the communities of Tena, Ecuador. Despite an increase in female enrollment in primary education, more than 70 million girls still account for 55% of the out-of-school population, including over 580 million illiterate women (twice the number of illiterate men) worldwide

(Children's Fund, 2009; WHO, 2009). Health literacy is a critical component of a woman's health status, without proper education, the female is unable to make informed decisions regarding her personal health and the health of her family. For example, child mortality rates are highest in households where mothers have received very minimal education (WHO, 2009). In order for the woman and her family to flourish, proper education is required. As exhibited in Tena, the majority (65.6%) of women did not receive formal sexual education in their school curriculum. This data is most likely influenced by the number of women who dropped out of school before sex education curriculum was introduced in the lectures. Nevertheless, women who remained in school longer still illustrated that there is a lack of sex education in their school system. Furthermore, because these women are typically not part of a formal labor market, they experience greater difficulty accessing health care resources and services. This gap also causes women to develop a level of dependency on her spouse for income and access to health services, thus resulting in greater spousal influence on a woman's health status.

As mentioned previously, the majority (58.3%) of women indicated that their mother is their main source of information regarding reproductive health and family planning. Such reliance demonstrates the importance of female education across all ages in order to ensure that younger females are receiving accurate information from their mothers and related peers. However, several women who were mothers to daughters of reproductive age indicated that talking about reproductive health or family planning to their daughter made them uncomfortable. Much like with other areas in the world, individuals need to become more comfortable talking about reproductive health and family planning to promote safe and healthy practices and habits.

Family size is another determinant of women's health. Women who experience early menarche have a higher risk of being married at a younger age, engaging in risky sexual

behavior, and having children at an unhealthy age (< 18 years of age) (WHO, 2009). Naturally, women who undergo a high number of childbirths will put unnecessary strain on her body, thus resulting in adverse health consequences. Ideally, a woman and her family should only have the number of children that they can support. Women in developing nations typically birth more children than average due to a lack of contraception and family planning, as well as outside influence from the husband and community.

As mentioned previously, females who engage in early sexual behavior have a much higher risk of contracting a sexually transmitted infection, as well as become more susceptible to pregnancy during adolescence. According to WHO (2008), adolescent childbearing results in adverse health outcomes not only for the mother, but also for the infant; perinatal deaths are 50% higher among infants born to mothers under 20 years of age compared to those born to mothers aged 20-29. Moreover, babies of adolescent mothers are more likely to have low birth weight, which is a risk factor for ill-health during infancy (WHO, 2008). Although this age parameter is defined heavily by the cultural and social implications within the communities of Tena, educational and environmental interventions could help better prepare and educate this specific demographic. Additionally, the probability of dying under the age of five in Ecuador is 23 out of 1000 live births, with rates significantly higher in the poor, rural regions of Ecuador (WHO, 2013b). This data further indicates that high levels of intervention are needed.

Contraception use and access to such resources greatly influence the health outcome of women. The research team later discovered that all forms of contraception are offered free of charge in the local health clinics, so it was a surprise to see that the majority of women were still not using contraception even though there seemed to be a zero cost barrier. However, the contraceptive implant was the highest reported method (28.6%) of birth control. Many women

indicated that they preferred the implant because it did not require any additional work for the woman or her partner. This particular form of contraception was recently introduced in Ecuador within the last 8-10 months and has proven effective and popular in the surveyed communities. This particular contraceptive method is a favorable option for women with little to no education who might have trouble with medicine compliance and remembering to take a pill everyday.

The research team also discovered that there are a lot of cultural misconceptions about the oral contraceptive pill, which are difficult to correct because they are rampant in the communities. Many women attribute the pill to infertility and cancer, which causes both women and local medical professionals to be reluctant to taking and prescribing an oral contraceptive. Additionally, only one in four women indicated that their primary reason to use birth control is to space or postpone pregnancy. This data suggests that there needs to be more formal education and information available for the women regarding family planning methods and the importance of spacing their children. In regards to unplanned pregnancy rates, there was some discrepancy and cultural misunderstanding between the study participants and the research team. When women were asked to identify their number of unplanned pregnancies, many women indicated that they never actually “planned” their pregnancy because this process is practically unheard of in these communities. Their cultural understanding of planned pregnancy has not been completely formulated, which gives another indication as to why family planning education would play a vital role in these communities and help shift cultural and social conceptions of this Westernized practice.

Nearly every community in the Tena region has a health clinic, or a “subcentro de salud.” In the Ecuadorian health care system, there are typically four levels of health centers: public and private hospitals, centros de salud, subcentros de salud, and puestos de salud. The size of the



health care facility is mostly dependent on the size of the local population it is meant to serve, although the Ecuadorian ministry is currently reevaluating these services and upgrading where necessary, which are presumed to take place within the coming months. Additionally, medical services for pregnant women and children under 5 years old are free of charge and regular prenatal and postnatal checkups are required to receive some of the welfare or “bono” benefits. Essentially, primary care is free for everyone if they are willing to wait in long lines. Although such facilities may exist in these communities, clearly this is not enough. It is very likely that these subcentros de salud lack adequate resources and medical personnel staff to address women’s health needs of the community. This study has identified that future work is needed in order to identify the type of services and personnel that are available (or lack thereof) in the local subcentros de salud.

An overwhelming majority (91.2%) of women indicated that they have regular access to the aforementioned health care facilities. However, the mere existence of health care facilities does not necessarily guarantee that women are receiving proper health resources and services. The affiliate organization of this research study, Timmy Global Health, takes particular interest in ensuring that every pregnant female receives prenatal care and it is evident that their efforts are reaching the majority of this demographic. For example, although such health centers are available, the majority (54.5%) of females have not received a formal vaginal examination (pap smear) during her lifetime. Such examinations are important in determining potential health risks for the female, particularly those related to cervical cancer and sexually transmitted infections. Such findings indicate that more formal knowledge must be imparted in schools regarding sexually transmitted infections and the importance of annual vaginal examinations.

Male influence is also considered a main determinant of women’s health in Tena.

Ecuador. In a “machismo,” or patriarchal and androcentric culture, the male is the dominant leader of the family and in most cases, has the final say in issues related to reproductive health and family planning, even if it is the woman’s health in question. Thus, such spousal disagreements in family size certainly affect the health status of the woman. In regards to contraception, one woman mentioned that her husband does not allow her to take contraception because it will “make her crazy,” a similar misnomer associated to the portrayal of women as “hormonal and emotionally unstable.” Many men in these communities are adamant that condoms make sex “feel” different and refuse to use them. In smaller communities of Tena, if a woman insists on using a condom, many community members will assume that she is promiscuous and/or cheating on her husband with other men. During these interviews, we discovered that there are a lot of myths about condoms in general; for example, some people believe that condoms cause cancer and others claim that it is not very effective because sperm can still swim through the “pores” of the latex.

As mentioned previously, the machismo culture lends to a variety of complications and barriers related to women’s health. It is very common for the husband or boyfriend to have the final say in a matter, even if it means he is controlling the health status of the woman. The male and female biological functions are still a very important part of gender roles in the communities, so if a man or woman is infertile, it results in feelings of shame and guilt. Even more so, women who are very fertile and have 6-12 children are revered. These numerous paradigms must be addressed when focusing on women’s reproductive health. Nearly one third of women also indicated that they do not feel respected by their husband or boyfriend. A few women mentioned that their husbands have alcohol dependency issues, while another woman admitted that her husband has multiple girlfriends or mistresses. Unfortunately, many women are still encumbered

by the decisions of their husband, which poses as a major barrier for women regarding their reproductive health.

Last, the majority of women (86.8% - 88.9%) indicated that they would attend a free sex education and family planning class should it be offered in their community. This internal support for such programming suggests that women in the community are interested in taking an active role to better manage their reproductive health and enhance their overall wellbeing.

## Conclusion

Based on the findings within the parameters of this research study, several conclusions were drawn:

1. Women are continuing to have children at a young age, which results in complications during pregnancy and later in life.
2. The majority of women drop out of school before sex education curriculum is formally introduced into the classroom.
3. It is still common practice for women to marry shortly after they begin menstruation; thus resulting in adolescent pregnancy and related health complications.
4. Women lack formal, in-depth education regarding reproductive health and family planning methods.
5. Mothers are the primary source of information regarding reproductive health and family planning.
6. The majority of women are not using contraception, even though it is a free service.
7. The majority of women lack adequate treatment and examinations related to reproductive health issues.
8. Women are continuing to smoke and/or drink during pregnancy, which puts both the

mother and baby at an increased risk for pregnancy complications and birth defects.

9. Men have maintained a high level of authority and influence over the women in the community, thus leading to potential conflicts of interest.

### Recommendations for Implementation of Health Promotion Programs

Based on the findings of this research project, the following recommendations can be made in regards to reproductive health and family planning among women in Tena, Ecuador. First and foremost, improving health education and health literacy should be the primary recommended implementation from this study. The majority of women surveyed exhibited low reproductive health knowledge and numerous misconceptions regarding the areas of focus. A majority of the problem can be attributed to the female's inability to manage risk. In general, uneducated, poor, rural communities have a completely different system for risk management and make unfavorable decisions regarding their health. In a community with low education levels, families tend to choose the known vice (children), rather than subjecting their health to misconceived risks associated with contraception (i.e. cancer and infertility). One particular intervention includes investigating the "mitos" or myths related to condoms and other forms of contraception not only to expose these misconceptions, but also to use these myths as a platform to correctly educate women and communities about their reproductive health and family planning options.

After recognizing the extensive machismo influence on maternal health and contraception, it is essential to include men in this public health intervention. After all, the health of the mother and child also affects the livelihood of the men in the community. Conversations that talk about nutrition, prenatal care, pregnancy, and breastfeeding are also important for health

care providers to be a part of so they understand how to better suit the needs of the females in their communities.

Developing an effective and respectful working relationship between the communities and local health clinics will also help improve the health status of all members of the community. More often than not, communities are unaware of the health clinic's hours of operation and the services they offer. In order to develop a more efficient referral system for women who wish to obtain materials or services, it is important to continue reinforcing grassroots efforts, while legitimizing the Ecuadorian health care system. Health behavior change is also crucial for future implementation because establishing healthy habits at a younger age can help a woman live a happy and healthy life. Communities must be able to tackle the factors associated to harmful behaviors in relation to their sexual health and family planning options. Furthermore, internal and external support must be given to these communities in order to help these women avoid harmful behaviors while encouraging them to adopt healthy ones.

Unfortunately, women are generally disadvantaged due to social, cultural, political, and economic factors, which directly influence their health and impede their access to health-related information and care. Overall, strategies to improve women's health must address the underlying determinants of health, specifically gender inequality, and must address the specific socioeconomic and cultural barriers that hinder women in protecting and improving their health. Furthermore, according to WHO, "gender mainstreaming" has become a preferred approach for improving women's health. This approach identifies the need to address gender discrimination, bias, and inequality that permeate the organizational structures of governments and organizations, including health systems (WHO, 2009). This approach also highlights that gender concerns must be addressed in every aspect of policy development and programming.



Overcoming these barriers will require a lot of time and resources, but the long-term benefits of developing a society and culture responsive to women's health needs is invaluable.

### Recommendations for Further Research

Further research should focus on expanding the number of participants in this particular study. Unfortunately, the research team was only able to survey thirty-nine women, but the primary investigator intends to expand these findings and interview at least 200 more women to provide deeper insight on this specific demographic. Further research should also focus on other members and entities of the community. In order to gain a deeper understanding of this issue, future research should focus specifically on men's knowledge and perceptions of reproductive health and family planning. While this study was being conducted, it became very apparent that men's knowledge and perceptions have a significant impact on the health status of women in the community. An in-depth understanding of a man's perspective regarding these topics of interest would lend valuable data for this study and future work. Furthermore, additional research should be conducted in the local schools and health clinics in order to expand on the information provided by the women in this study.

### Study Limitations

Numerous limitations have been identified for this particular study. First and foremost, the study size was smaller than desired so a thorough understanding of the women in Tena, Ecuador cannot be determined until more women are surveyed. Additionally, cultural and language barriers were a particular challenge for this study. Because all of the data was self-reported in person, the responses to the survey were subject to social desirability and recall bias. Furthermore, recruitment of the study participants was also restricted to females thereby limiting the external validity of the findings.

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# Appendix

Women’s Health Survey – English .....	34
Women’s Health Survey – Spanish .....	36
Informed Consent – English .....	38
Informed Consent – Spanish .....	39
Parental Consent – English .....	40
Parental Consent – Spanish .....	41
Child Assent – English .....	42
Child Assent – Spanish .....	43
Letter of Support .....	44
IRB Letter of Approval .....	45

**FEMALES ONLY**

COMMUNITY \_\_\_\_\_

**[1] DEMOGRAPHICS**

- a. Age \_\_\_\_\_ yrs. b. Number of children \_\_\_\_\_ c. Age of children \_\_\_\_\_ d. Body weight \_\_\_\_\_ lbs.  
e. Height \_\_\_\_\_ f. Pregnant? Y / N / NS g. Months pregnant \_\_\_\_\_ h. Employed? Y / N  
i. Employed full time or part time? j. Relationship status: ☐ Married ☐ Divorced ☐ Dating ☐ Single

**[2] AGE OF FIRST....**

- a. Menstruation \_\_\_\_\_ b. Sexual intercourse \_\_\_\_\_ c. Childbirth \_\_\_\_\_ d. Marriage \_\_\_\_\_

**[3] HOW MANY YEARS IN SCHOOL? \_\_\_\_\_**

- a. In school, did you ever have a lesson or talk about sex education? Y / N / Not sure  
b. If yes for 3a., how old were you during this first lesson or talk? \_\_\_\_\_  
c. In the lesson or talk, which of the following did you learn about? (*Read all & check all that apply*):  

<input type="checkbox"/> The development of the body at puberty (changes outside the body)	<input type="checkbox"/> Sexual relations
<input type="checkbox"/> The female reproductive system	<input type="checkbox"/> Pregnancy and childbirth
<input type="checkbox"/> The male reproductive system	<input type="checkbox"/> Birth control
<input type="checkbox"/> Menstruation	<input type="checkbox"/> Sexually transmitted diseases
	<input type="checkbox"/> Other topics

  
d. Who do you speak with to learn about menstruation, sexual relations, birth control, etc.?  
☐ Parents ☐ Friends ☐ Teachers ☐ Employers ☐ Brothers ☐ Sisters ☐ Relatives ☐ Doctors ☐ Other  
e. If she has a daughter of childbearing age, has she talked to her daughter about: (*Check all that apply*)  
☐ Sexual relations ☐ Birth control ☐ Puberty ☐ Menstruation ☐ STD ☐ Other topics  
f. Why or why not? \_\_\_\_\_

**[4] DO YOU USE CONTRACEPTION? Y / N [*If NO, continue to section 8*]**

- a. If yes, what primary method do you use? (*Check all that apply*)  
☐ IUD or Copper T spiral ☐ Contraceptive injection/shot ☐ Implant ☐ Contraceptive pill or tablet  
☐ Condom ☐ Withdrawal (removal when it will end) ☐ Abstinence ☐ Other \_\_\_\_\_  
b. Why do you use birth control?  
*[check all that apply]*  

<input type="checkbox"/> Does not want anymore children	<input type="checkbox"/> Same
<input type="checkbox"/> To space or postpone pregnancy	<input type="checkbox"/> Different
<input type="checkbox"/> To protect against AIDS and other STDs	<input type="checkbox"/> Does not know
<input type="checkbox"/> For other health reasons	
<input type="checkbox"/> For economic or work related reasons	
<input type="checkbox"/> Other _____	
<input type="checkbox"/> Not sure / No response	

  
c. If you could choose, would you continue using the same birth control or choose another?  
  
d. Where do you get your birth control?  
\_\_\_\_\_  
e. How much does it cost? \_\_\_\_\_

**[5] DO YOU PLAN TO USE BIRTH CONTROL IN THE FUTURE? Y / N / Not sure**

- a. If no, what is the primary reason why you do not use birth control? (*Check all that apply*)  

<input type="checkbox"/> Desire to get pregnant	<input type="checkbox"/> Not sexually active	<input type="checkbox"/> Fear of side effects	<input type="checkbox"/> Partner opposes
<input type="checkbox"/> Religious reasons	<input type="checkbox"/> Too old, not applicable	<input type="checkbox"/> Economic reasons	<input type="checkbox"/> Other _____



**[6] HAVE YOU EVER RECEIVED TREATMENT FOR A REPRODUCTIVE HEALTH ISSUE? Y / N**

a. If yes, which one(s)? \_\_\_\_\_

b. Have you ever had a vaginal examination/pap smear? Y / N c. When? \_\_\_\_\_

**[7] HAVE YOU EVER HAD A SEXUALLY TRANSMITTED DISEASE? Y / N / Not sure**

a. If yes, which one(s)? \_\_\_\_\_ b. At what age? \_\_\_\_\_

c. Which of the following sexually transmitted diseases have you heard of? *(Read all & check all that apply):*

☐ Syphilis ☐ Gonorrhea ☐ Genital Herpes ☐ Genital warts ☐ Chlamydia ☐ Hepatitis B

☐ Human Papilloma Virus ☐ Trichomoniasis ☐ HIV/AIDS ☐ Other \_\_\_\_\_

d. Do you think a person can be infected with an STD and present no symptoms? Y / N / Not sure

**[8] FAMILY PLANNING**

a. Do you plan to have (more) children? Y / N / NS b. How many children do you plan to have? \_\_\_\_\_

c. How many of your children have died under the age of 1? \_\_\_\_\_ d. Under the age of 5? \_\_\_\_\_

e. How many still births have you had? \_\_\_\_\_ f. How many miscarriages have you had? \_\_\_\_\_

g. How many of your children's births were unplanned? \_\_\_\_\_ h. Did you want all of your children? Y / N

i. Can you get pregnant while breastfeeding? Y / N / NS

j. Have you ever had complications during any of your pregnancies? Y / N / NS

k. If yes, what complications? \_\_\_\_\_

**[9] PRENATAL CARE & ACCESS TO SERVICES**

a. Have you ever received prenatal care? Y / N / NS b. What did you get? \_\_\_\_\_

c. Where did you get it from? \_\_\_\_\_ d. How much did it cost? \_\_\_\_\_

e. Do you have regular access to a health care provider? Y / N / NS

f. Where do you go when you need health care services? \_\_\_\_\_

g. Do you smoke or use alcohol? Y / N h. What about during your pregnancy? Y / N

**[10] MALE INFLUENCE**

a. Does your husband (or boyfriend) care about using contraception? Y / N / NS

b. Does your husband (or boyfriend) respect your opinion? Y / N / NS

**[11] OPINION & NEEDS ASSESSMENT**

a. What do you think is the right age for females and males to start having sex? \_\_\_\_\_

b. Would you attend a free sex education class? Y / N / Not sure

c. If no, why not? \_\_\_\_\_

d. What barriers would keep you from attending a reproductive health class?

Opinion about reproductive health services:

**[1] DEMOGRAFÍA**

- a. Edad \_\_\_\_\_ años   b. Número de hijos \_\_\_\_\_   c. Edad de hijos \_\_\_\_\_   d. ¿Está casada? Sí / No  
e. Altura \_\_\_\_\_   f. ¿Embarazada? Sí/No/NS   g. Meses de embarazo \_\_\_\_\_   h. ¿Empleado? Sí/No/NS  
i. ¿Empleado a tiempo completo o parcial?   j. Estado civil: ☐ Casada ☐ Divorciada ☐ Citas ☐ Individual

**[2] ¿QUÉ EDAD TENÍA DURANTE LA PRIMERA .....?**

- a. Menstruación regla \_\_\_\_\_   b. Relación sexual \_\_\_\_\_   c. Parto \_\_\_\_\_   d. Matrimonio \_\_\_\_\_

**[3] ¿CUÁNTOS AÑOS EN LA ESCUELA? \_\_\_\_\_**

- a. En la escuela, ¿alguna vez recibió una lección o charla sobre educación sexual ? Sí / No / No sabe  
b. ¿Qué edad tenía cuando recibió la primera lección o charla? \_\_\_\_\_  
c. En esa lección o charla, ¿se comentó algo sobre: (*Léale uno a uno y marque todas las que correspondan*):

- |   |  |
|---|--|
| <input type="checkbox"/> El desarrollo del cuerpo en la pubertad<br>(cambios externos del cuerpo) | <input type="checkbox"/> Las relaciones sexuales               |
| <input type="checkbox"/> El aparato reproductor femenino  | <input type="checkbox"/> El embarazo y el parto                |
| <input type="checkbox"/> El aparato reproductor masculino   | <input type="checkbox"/> Los métodos anticonceptivos           |
| <input type="checkbox"/> La menstruación o regla  | <input type="checkbox"/> Las infecciones de transmisión sexual |
|   | <input type="checkbox"/> VIH/SIDA                              |

- d. ¿A quién habla para aprender sobre el sexo, la menstruación, los anticonceptivos, etc.?

☐ Los padres   ☐ Amigos   ☐ Maestros   ☐ Los empleadores   ☐ Hermanos   ☐ Hermanas   ☐ Familia   ☐ Médico   ☐ Otro

- e. Si ella tiene una hija de edad fértil, se hablaba con su hija sobre: [*marque todo que corresponda*]

☐ Las relaciones sexuales   ☐ Anticonceptivos   ☐ Pubertad   ☐ Menstruación   ☐ STD   ☐ Otros temas

- f. ¿Por qué o por qué no? \_\_\_\_\_

**[4] ¿USA ANTICONCEPTIVOS? Sí / No [*Si NO, continuarse a sección 5*]**

- a. En caso afirmativo, ¿cuál fue el primer método que usted usó? [*marque todo que corresponda*]

☐ DIU, espiral o T de Cobre   ☐ Inyección anticonceptiva   ☐ Implante   ☐ Pastilla anticonceptiva  
☐ Condón   ☐ Retiro (él se retira cuando va a terminar)   ☐ Abstinencia   ☐ Otro \_\_\_\_\_

- b. ¿Por qué se usa anticonceptivos?

[*marque todas las que correspondan*]

- ☐ Ya no quiere tener más hijos  
☐ Para espaciar/posponer los embarazos  
☐ Para protección del SIDA y otras ITS  
☐ Por otras razones de salud  
☐ Por razones económicas/trabajo  
☐ Otra, ¿cuál? \_\_\_\_\_  
☐ No sabe / no responde

- c. Si en éste momento usted pudiera elegir,  
¿Seguiría usando el mismo método o preferiría  
usar otro?

☐ El mismo   ☐ Preferiría otro   ☐ No sabe

- d. ¿De dónde obtiene su anticonceptivos?

\_\_\_\_\_

- e. ¿Cuánto cuestan? \_\_\_\_\_

**[5] ¿TIENE PLANES DE USAR UN MÉTODO ANTICONCEPTIVO EN EL FUTURO? Sí / No / No sabe**

- a. Si no, ¿Cuál es la razón principal que usted no usa un método anticonceptivo? [*marque todo que corresponda*]

☐ Deseo de embarazo   ☐ Sin vida sexual   ☐ Miedo a efectos colaterales   ☐ El compañero se opone  
☐ Razones religiosas   ☐ Edad avanzada   ☐ Razones económicas   ☐ Otra, ¿cuál? \_\_\_\_\_

**[6] ¿HA RECIBIDO TRATAMIENTO POR UN TEMA DE SALUD REPRODUCTIVA?**

- a. En caso afirmativo, ¿cuál(es)? \_\_\_\_\_
- b. ¿Alguna vez ha tenido un examen vaginal por un médico? Y / N c. ¿Cuándo? \_\_\_\_\_

**[7] ¿ALGUNA VEZ HA TENIDO UNA ENFERMEDAD DE TRANSMISIÓN SEXUAL? Sí / No / No sabe**

- a. En caso afirmativo, ¿cuál(es)? \_\_\_\_\_ b. ¿A qué edad? \_\_\_\_\_

- c. ¿De cuáles infecciones de transmisión sexual ha oído hablar?

*(Léale uno a uno y marque todas las que correspondan):*

- ☐ Sífilis ☐ Gonorrea ☐ Herpes Genital ☐ Condilomas (verrugas) ☐ Chlamydia ☐ Hepatitis B
- ☐ Virus de Papiloma humano ☐ Trichomoniasis ☐ VIH/SIDA ☐ Otra, ¿cuál? \_\_\_\_\_

- d. ¿Piensa Ud. que una persona puede estar infectada de una enfermedad de transmisión sexual y no presentar síntomas (señales) de la enfermedad? Sí / No / No sabe

**[8] PLANIFICACIÓN FAMILIAR**

- a. ¿Quisiera tener un (otro) hijo? Sí / No / No sabe b. ¿Cuántos hijos planea tener? \_\_\_\_\_
- c. ¿Cuántos de sus hijos han muerto en la edad de 1 años? \_\_\_\_\_ d. ¿De 5 años? \_\_\_\_\_
- e. ¿Cuántos nacidos muertos ha tenido? \_\_\_\_\_ f. ¿Cuántos abortos involuntarios ha tenido? \_\_\_\_\_
- g. ¿Cuántos de los nacimientos de sus hijos no fueron planeados? \_\_\_\_\_ h. ¿Quiere todos los niños? Sí/No
- i. ¿Se puede quedar embarazada durante la lactancia? Sí / No / NS
- j. ¿Ha tenido complicaciones durante alguno de sus embarazos? Sí / No / NS
- k. En caso afirmativo, ¿qué complicaciones? \_\_\_\_\_

**[9] CUIDADO PRENATAL Y ACCESO A LOS SERVICIOS**

- a. ¿Tuvo algún control prenatal cuando estaba embarazada? Sí/No/NS b. ¿Qué se obtiene? \_\_\_\_\_
- c. ¿De dónde ha sacado? \_\_\_\_\_ d. ¿Cuánto cuesta? \_\_\_\_\_
- e. ¿Tiene acceso regular a un médico? Sí / No / NS
- f. ¿Dónde va cuando necesita los servicios de salud? \_\_\_\_\_
- g. ¿Fuma o consume alcohol? Sí / No h. ¿Fuma o consume alcohol durante su embarazo? Sí / No

**[10] INFLUENCIA MASCULINA**

- a. ¿Su esposo (o novio) cuidarse sobre el uso de anticonceptivos? Sí / No / No sabe
- b. ¿Su esposo (o novio) respeta su opiniones? Sí / No / No sabe

**[11] OPINIÓN Y EVALUACIÓN DE NECESIDADES**

- a. ¿Cuál cree que sería la edad adecuada para iniciar las relaciones sexuales para las mujeres? \_\_\_\_\_
- b. ¿Quieres ir a una clase de educación sexual libre? Sí / No / No sabe
- c. Si no, ¿por qué no? \_\_\_\_\_
- d. ¿Quieres ir a una clase de planificación familiar libre? Sí / No / No sabe
- e. Si no, ¿por qué no? \_\_\_\_\_
- f. ¿Qué barreras que le impiden ir a una clase de salud reproductiva?



## GAINING VERBAL ADULT CONSENT - ENGLISH

Good morning/afternoon,

My name is \_\_\_\_\_. I am a Ball State student working in collaboration with Timmy Global Health to study the knowledge and perceptions of reproductive health and family planning among women in Tena, Ecuador. The results from this study will be used to develop a women's health program for you and the other women in your community.

In order to participate in this study, you must be a female between the ages of 15 and 65 and be able to understand Spanish and verbally respond to the questions. For this study, you will be asked numerous questions regarding your reproductive health and family planning practices; it will take approximately 15 minutes to complete.

All of your answers will remain confidential and your name will not be identified in this study. All of the data will be stored in a locked filing cabinet in the researcher's office for five years and then will be shredded. The data will also be entered into a software program and stored on the researcher's password-protected computer for five years and then deleted. Only members of the research team will have access to the data.

If you do not feel comfortable answering some of the questions, you may choose not to answer them and you may quit the study at any time. Furthermore, this decision will not affect your level of care or services during the medical brigade. Should you experience any feelings of anxiety, you may speak with one of the doctors on staff during the scheduled medical brigade today.

This study may help you better understand your reproductive health and family planning options. Furthermore, a women's health program will be created based on the results of this study.

Your participation in this study is completely voluntary and you are free to withdraw your permission at anytime for any reason without penalty. Please feel free to ask any questions of the investigator before giving consent and at any time during the study.

For questions about your rights as a research subject, please contact the Timmy Global Health medical brigade coordinator (August Longino) who can put you in touch with the Director at the Office of Research Integrity at Ball State University, Muncie, Indiana 47306 at (765) 285-5070 or at [irb@bsu.edu](mailto:irb@bsu.edu).

By responding 'Yes', you agree to participate in this research project entitled, "Knowledge and Perceptions of Reproductive Health and Family Planning Among Women in Tena, Ecuador." You have had the study explained to you and your questions have been answered to your satisfaction. To the best of your knowledge, you meet the requirements for this study.

- ☐ Yes, the adult has given consent to participate in this study.
- ☐ No, the adult has denied consent to participate in this study.

## OBTENER EL CONSENTIMIENTO VERBAL DE LOS ADULTOS – ESPAÑOL

Buenos días / Buenas tardes,

Mi nombre es \_\_\_\_\_. Estoy un/a estudiante de Ball State University y estoy trabajando con Timmy Global Health para estudiar el conocimiento y la percepción de la salud reproductiva y la planificación familiar sobre las mujeres en Tena, Ecuador. Los resultados de este estudio serán utilizados para desarrollar un programa de salud para usted y las mujeres en su comunidad.

Puedes participar en este estudio si eres una mujer entre las edades de 15 y 65 años y puede entender español y responder a las preguntas. Para este estudio, se le hicieron numerosas preguntas con respecto a su salud reproductiva y sus prácticas de planificación familiar; tomará aproximadamente 15 minutos para completar.

Todas sus respuestas serán confidenciales y su nombre no serán identificados en este estudio. Todos los datos se guardan en un archivador bajo llave en la oficina del investigador durante cinco años y luego será destruido. Los datos también serán introducidos en un programa de software y se almacena en una computadora protegida con contraseña del investigador durante cinco años y luego eliminado. Sólo los miembros del equipo de investigación tendrá acceso a los datos.

Si usted no se siente cómodo contestando algunas de las preguntas, usted puede optar por no responder a las preguntas y que podría abandonar el estudio en cualquier momento. Además, esta decisión no afectará su nivel de atención o servicios durante la brigada. Si experimenta cualquier sensación de ansiedad, puede hablar con uno de los médicos durante la brigada médica para hoy.

Este estudio puede ayudar a entender mejor su salud reproductiva y las opciones de planificación familiar. Además, un programa de salud de la mujer se creará sobre la base de los resultados de este estudio.

Su participación en este estudio es completamente voluntaria y usted es libre de retirar su consentimiento en cualquier momento por cualquier motivo y sin penalización. Por favor, siéntase libre de preguntar al investigador antes de dar su consentimiento y en cualquier momento durante el estudio.

Si tiene alguna pregunta sobre sus derechos como sujeto de investigación, por favor póngase en contacto con el coordinador de la brigada médica de Timmy Global Health (August Longino) que pueda ponerse en contacto con el Director de la Oficina de Integridad de la Investigación en la Ball State University, Muncie, Indiana 47306 al (765 ) 285-5070 o en [irb@bsu.edu](mailto:irb@bsu.edu).

Al responder "Sí", usted se compromete a participar en este proyecto de investigación titulado "El Conocimiento y la Percepción de la Salud Reproductiva y la Planificación Familiar Sobre las Mujeres en Tena, Ecuador." Ha tenido el estudio explicado a usted y sus preguntas han sido contestadas a su satisfacción. Al mejor de su conocimiento, usted cumple con los requisitos para este estudio.

- ☐ Sí, la mujer ha dado su consentimiento para participar en este estudio.
- ☐ No, la mujer ha denegado su consentimiento para participar en este estudio.



## GAINING VERBAL PARENTAL CONSENT FOR MINOR - ENGLISH

Good morning/afternoon,

My name is \_\_\_\_\_. I am a Ball State student working in collaboration with Timmy Global Health to study the knowledge and perceptions of reproductive health and family planning among women in Tena, Ecuador. The results from this study will be used to develop a women's health program for your daughter and the other women in your community.

In order to participate in this study, your daughter must be between the ages of 15 and 65 and be able to understand Spanish and verbally respond to the questions. For this study, she will be asked numerous questions regarding her reproductive health and family planning practices; it will take approximately 15 minutes to complete.

All of her answers will remain confidential and her name will not be identified in this study. All of the data will be stored in a locked filing cabinet in the researcher's office for five years and then will be shredded. The data will also be entered into a software program and stored on the researcher's password-protected computer for five years and then deleted. Only members of the research team will have access to the data.

If she does not feel comfortable answering some of the questions, she may choose not to answer them and she may quit the study at any time. Should she experience any feelings of anxiety, she may speak with one of the doctors on staff during the scheduled medical brigade today.

This study may help her better understand her reproductive health and family planning options. Furthermore, a women's health program will be created based on the results of this study.

Her participation in this study is completely voluntary and she is free to withdraw her permission at anytime for any reason without penalty. Furthermore, this decision will not affect you or your daughter's level of care or services during the medical brigade. Please feel free to ask any questions of the investigator before giving consent and at any time during the study.

For questions about her rights as a research subject, please contact the Timmy Global Health medical brigade coordinator (August Longino) who can put you in touch with the Director at the Office of Research Integrity at Ball State University, Muncie, Indiana 47306 at (765) 285-5070 or at [irb@bsu.edu](mailto:irb@bsu.edu).

By responding 'Yes', you agree that your daughter may participate in this research project entitled, "Knowledge and Perceptions of Reproductive Health and Family Planning Among Women in Tena, Ecuador." You have had the study explained to you and your questions have been answered to your satisfaction. To the best of your knowledge, your daughter meets the requirements for this study.

- ☐ Yes, the parent/guardian has given consent for his/her daughter to participate in this study.
- ☐ No, the parent/guardian has denied consent for his/her daughter to participate in this study.

## OBTENER EL CONSENTIMIENTO VERBAL DE LOS ADULTOS PARA SU HIJA - ESPAÑOL

Buenos días / Buenas tardes,

Mi nombre es \_\_\_\_\_. Estoy un/a estudiante de Ball State University y estoy trabajando con Timmy Global Health para estudiar el conocimiento y la percepción de la salud reproductiva y la planificación familiar sobre las mujeres en Tena, Ecuador. Los resultados de este estudio serán utilizados para desarrollar un programa de salud para su hija y las mujeres en su comunidad.

Puedes participar en este estudio si tu hija está entre las edades de 15 y 65 años y puede entender español y responder a las preguntas. Para este estudio, se le hicieron numerosas preguntas con respecto a su salud reproductiva y sus prácticas de planificación familiar; tomará aproximadamente 15 minutos para completar.

Todas sus respuestas serán confidenciales y su nombre no serán identificados en este estudio. Todos los datos se guardan en un archivador bajo llave en la oficina del investigador durante cinco años y luego será destruido. Los datos también serán introducidos en un programa de software y se almacena en una computadora protegida con contraseña del investigador durante cinco años y luego eliminado. Sólo los miembros del equipo de investigación tendrá acceso a los datos.

Si ella no se siente cómodo contestando algunas de las preguntas, ella puede optar por no responder a las preguntas y que podría abandonar el estudio en cualquier momento. Además, esta decisión no afectará nivel de atención o servicios a usted o su hija durante la brigada médica. Si experimenta cualquier sensación de ansiedad, puede hablar con uno de los médicos durante la brigada médica para hoy.

Este estudio puede ayudar a entender mejor su salud reproductiva y las opciones de planificación familiar. Además, un programa de salud de la mujer se creará sobre la base de los resultados de este estudio.

Su participación en este estudio es completamente voluntaria y ella es libre de retirar su consentimiento en cualquier momento por cualquier motivo y sin penalización. Por favor, siéntase libre de preguntar el investigador antes de dar su consentimiento y en cualquier momento durante el estudio.

Si tiene alguna pregunta sobre sus derechos como sujeto de investigación, por favor póngase en contacto con el coordinador de la brigada médica de Timmy Global Health (August Longino) que pueda ponerse en contacto con el Director de la Oficina de Integridad de la Investigación en la Ball State University, Muncie, Indiana 47306 al (765 ) 285-5070 o en [irb@bsu.edu](mailto:irb@bsu.edu).

Al responder "Sí", usted se compromete que su hija puede participar en este proyecto de investigación titulado "El Conocimiento y la Percepción de la Salud Reproductiva y la Planificación Familiar Sobre las Mujeres en Tena, Ecuador." Ha tenido el estudio explicó a ella y sus preguntas han sido contestadas a su satisfacción. Al mejor de su conocimiento, su hija cumple con los requisitos para este estudio.

- ☐ Sí, el adulto ha dado su consentimiento para su hija para participar en este estudio.
- ☐ No, el adulto ha denegado su consentimiento para su hija para participar en este estudio.



## GAINING VERBAL MINOR CONSENT - ENGLISH

Good morning/afternoon,

My name is \_\_\_\_\_. I am a Ball State student working with Timmy Global Health to develop a women's health program for your community and if you would like, you can be in my study.

If you decide you want to be in my study, I would like to ask you questions about female health so I can help your mom and your sisters be healthier. Some of the questions might make you feel uncomfortable, but you do not have to answer them if you do not want to.

Other people will not know if you are in my study. I will put things I learn about you together with things I learn about other teens, so no one can tell what things came from you. When I tell other people about my research, I will not use your name, so no one can tell who I am talking about.

Your parents or guardian have to say it's OK for you to be in the study. After they decide, you get to choose if you want to do it too. If you don't want to be in the study, no one will be mad at you. If you want to be in the study now and change your mind later, that's OK. You can stop at any time. Any decision you make will not affect your visit at the clinic today.

If you have any questions about the study, you can contact Timmy Global Health's medical brigade coordinator (August Longino) and he will help you get in touch with me so we can talk about the study.

Your parents have decided that it is okay if you help me, after you decide, we will begin.

*[Gain Adolescent Consent]*

- ☐ Yes, the adolescent has given consent to participate in this study.
- ☐ No, the adolescent has denied consent to participate in this study.

## OBTENER EL CONSENTIMIENTO VERBAL DE UN MENOR DE EDAD – ESPAÑOL

Buenos días / Buenas tardes,

Mi nombre es \_\_\_\_\_. Estoy un/a estudiante de Ball State University y estoy trabajando con Timmy Global Health para introducir un programa de salud para las mujeres en su comunidad y si tu lo deseas, puedes estar en mi estudio.

Si decides que quieres estar en mi estudio, me gustaría hacerte algunas preguntas sobre la salud femenina para poder ayuda a tu mamá y tus hermanas para ser más saludables. Algunas de las preguntas podrían hacerte sentir incómodo, pero no tienes contestar si no quieres.

Otras personas no sabrá si estás en mi estudio. Voy a poner las cosas que aprendo de ti junto con las cosas que aprendo sobre otros adolescentes, por lo que nadie puede decir qué cosas vienen de ti. Cuando le digo a la gente acerca de mi investigación, no voy a usar tu nombre, para que nadie pueda decir que yo estoy hablando sobre ti.

Tus padres tienen que decir que está bien para que puedes participar en el estudio. Después de que se decida, puedes elegir si desea hacerlo también. Si no deseas participar en el estudio, nadie te enojará contigo. Si deseas participar en el estudio ahora y cambias tu opinión más tarde, eso está bien. Puedes parar en cualquier momento. Cualquier decisión que tome, no afectará su visita en la clínica hoy.

Si tienes alguna pregunta sobre el estudio, puedes comunicarse con el coordinador de la brigada médica de Timmy Global Health (August Longino) que pueda ponerte en contacto conmigo para que podamos hablar sobre el estudio.

Sus padres han decidido que está bien si me ayudas, después de que tú decidas, vamos a empezar.

[Obtener el consentimiento del adolescente]

- ☐ Sí, el adolescente ha dado su consentimiento para participar en este estudio.
- ☐ No, el adolescente ha denegado su consentimiento para participar en este estudio.

2 East 22<sup>nd</sup> Street  
Indianapolis, IN  
46202

Tel 317.920.1822  
Fax 317.920.1821

February 12, 2013


To Whom It May Concern:

Timmy Global Health (formerly the Timmy Foundation) is an Indianapolis-based 501(c)3 that exists to expand access to healthcare and empower students and volunteers to tackle global health challenges firsthand. We have established partners throughout the developing world, including a strong established partnership with the Staddler-Richter Hospital in Archidona, Ecuador.

In collaboration with our partners in the Amazon Basin, we acknowledge and support the work of Emily Miller from Ball State University in conducting reproductive health and family planning research during our Ball State medical service trip to that region this March. We recognize Emily's research and her ability to conduct this study in collaboration with Timmy and our international partners in a manner that upholds ethical standards and respects the rights of both our international partner organization and our patients.

Many thanks for your consideration of Emily Miller's proposal. Please do not hesitate to contact me should you have any additional questions regarding her research.

Sincerely,



Kathy Morris  
Programs Coordinator  
Timmy Global Health

[Kathy@timmyglobalhealth.org](mailto:Kathy@timmyglobalhealth.org)  
317.920.1822







## Institutional Review Board

DATE: February 20, 2013

TO: Emily Miller, B.S. Health Science

FROM: Ball State University IRB

RE: IRB protocol # 430699-1

TITLE: Knowledge and Perceptions of Reproductive Health and Family Planning  
Among Women in Tena, Ecuador

SUBMISSION TYPE: New Project

ACTION: APPROVED

DECISION DATE: February 20, 2013

EXPIRATION DATE: February 19, 2014

REVIEW TYPE: Expedited Review

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The Institutional Review Board has approved your New Project for the above protocol, effective February 20, 2013 through February 19, 2014. All research under this protocol must be conducted in accordance with the approved submission.

### **Editorial Notes:**

1. APPROVED

**As a reminder, it is the responsibility of the P.I. and/or faculty sponsor to inform the IRB in a timely manner:**

- when the project is completed,
- if the project is to be continued beyond the approved end date,
- if the project is to be modified,
- if the project encounters problems, or
- if the project is discontinued.

Any of the above notifications should be addressed in writing and submitted electronically to the IRB (<http://www.bsu.edu/irb>). Please reference the IRB protocol number given above in any communication to the IRB regarding this project. Be sure to allow sufficient time for review and approval of requests for modification or continuation. If you have questions, please contact Jennifer Weaver at 765-285-5034 or [jmweaver@bsu.edu](mailto:jmweaver@bsu.edu).